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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/872,702	06/01/2001	Eugen Koren	11669.72USU1	9131

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EXAMINER
SPECTOR, LORRAINE

ART UNIT	PAPER NUMBER
1647	18

DATE MAILED: 04/11/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

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This is a communication from the examiner in charge of your application.
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OFFICE ACTION SUMMARY

☒ Responsive to communication(s) filed on 2/5/03.

☒ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 D.C. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 1-13, 22, 30, 31, 35-51 is/are pending in the application.
Of the above, claim(s) _____ is/are withdrawn from consideration.
☐ Claim(s) _____ is/are allowed.
☒ Claim(s) 1-13, 22, 30, 31, 35-51 is/are rejected.
☐ Claim(s) _____ is/are objected to.
☐ Claim(s) _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
☐ The specification is objected to by the Examiner.
☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been

☐ received.
☐ received in Application No. (Series Code/Serial Number) _____.
☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____.

☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of Reference Cited, PTO-892
☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____
☐ Interview Summary, PTO-413
☐ Notice of Draftperson's Patent Drawing Review, PTO-948
☐ Notice of Informal Patent Application, PTO-152

--SEE OFFICE ACTION ON THE FOLLOWING PAGES--

* U.S. GPO: 1996-404-496/40517

Part III: Detailed Office Action

Claims 1-13, 22, 30 and 31, and newly introduced claims 35-51 are under consideration.

Claim 31 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. A host cell does not further limit a method of modifying a nucleic acid.

Objections and Rejections under 35 U.S.C. §112:

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-13, 22, 30 and 31 remain, and newly introduced claims 35-51 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claims are confusing, and therefore indefinite because of the inconsistent use of the terms "*in*" (see for example, claims 1 and 10) or "*on*" (as in claims such as claim 47 or 48) a therapeutic peptide. It is not clear whether these terms are intended to be synonymous, or if not, what the difference is between an epitope *in* a peptide and an epitope *on* a peptide. Case law has repeatedly held that when a different term is used in a claim, it must be for a reason, that is, be intended to convey a different meaning. Because of these inconsistencies, the claims are indefinite.

In claim 10, it remains unclear how the immunodominant epitope is identified by binding to antibodies from both naive and non-naive individuals. Such is unclear as a method step, as it is not clear in what order the two things are done, nor how the result identifies the immunodominant epitope. Further, it would seem apparent that if a naive individual has an antibody to a particular protein, that non-naive individuals would have that same antibody. While it is understood that the epitope must bind both to an antibody from a naive and one from a non-naive subject, it is not clear to the Examiner that there would exist any epitopes that meet the former but not the latter

requirement; applicants have not addressed this point in their response. The claim contains no step for comparing the results from the two trials (naive vs. non-naive, nor an indication of what result would indicate an immunodominant epitope. This issue applies also to other claims, such as claims 11 and 22, as well as newly submitted claims such as claims 46-47, for example.

In claim 12, it remains that the significance of the recitation that the antibody does not substantially inhibit a therapeutic activity of the therapeutic peptide is unclear; any antibody that binds to the peptide would reasonably be expected to inhibit at least one activity, e.g. inhibit clearance, or increase clearance and therefore inhibit serum half-life. Accordingly, it is not seen how an antibody could meet the limitation of the claim, nor how that limitation relates to part (b) of the claim. Applicants traversal in paper number 17, filed 2/5/03, has been fully considered but is not deemed persuasive. Applicants argue that the term therapeutic activity is defined at page 8 lines 6-15 of the specification, and that the person of ordinary skill in the art would know the meaning to the term "reducing an immune response". This argument has been fully considered but is not deemed persuasive for reasons stated in the original rejection, reproduced in full above. The term "reducing an immune response is not pertinent to this grounds of rejection. It remains that it is not clear to the Examiner how an antibody that binds a therapeutic peptide could *fail* to affect at least one "substantial therapeutic activity of the polypeptide" to which it binds. Newly introduced claim 48 is similarly indefinite.

Claim 22 remains an incomplete method claim, as there are no method steps that would accomplish the goal of part (b); it is not clear how one determines "whether the identified epitope more frequently elicits an antibody response than other epitopes in the polypeptide." It is not clear by whom the antibody response is elicited, nor how much more frequently that response would have to be elicited to be identified as an immunodominant epitope.

Claim 30 is an incomplete method claim; "using" is not a method step. It is not clear in part (a) of the claim how the antibodies are "used" to identify an immunodominant epitope. Several newly introduced claims such as claims 35 and 48 are similarly indefinite.

The remaining claims are rejected for depending from an indefinite claim.

Prior Art:

Applicants arguments of the prior art rejections have been found persuasive.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Both Lutz (Scand. J. Immunol. 49:224-228, 1999) and Seledtsov et al. (Immunol. Cell Biol. 75:176-180, 1997) disclose and discuss the role of pre-existing antibodies in primary immune responses to non-self antigens.

Advisory Information:

No claim is allowed.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Lorraine M. Spector, whose telephone number is (703) 308-1793. Dr. Spector can normally be reached Monday through Friday, 9:00 A.M. to 5:30 P.M.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Dr. Gary L. Kunz, at (703)308-4623.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist at telephone number (703) 308-0196.

Certain papers related to this application may be submitted to Group 1800 by facsimile transmission. Papers should be faxed to Technology Center 1600 via the PTO Fax Center located in Crystal Mall 1 (CM1). The faxing of such papers must conform with the notices published in the Official Gazette, 1156 OG 61 (November 16, 1993) and 1157 OG 94 (December 28, 1993) (see 37 C.F.R. § 1.6(d)). NOTE: If Applicant *does* submit a paper by fax, the original signed copy should be retained by applicant or applicant's representative. NO DUPLICATE COPIES SHOULD BE SUBMITTED so as to avoid the processing of duplicate papers in the Office.

Official papers filed by fax should be directed to (703) 872-9306 (before final rejection) or (703)872-9307 (after final). Faxed draft or informal communications with the examiner should be directed to (703) 746-5228.

Lorraine Spector, Ph.D.
Primary Examiner

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NCBI PubMed National Library of Medicine

PubMed Nucleotide Protein Genome Structure PMC Taxonomy OMIM Bc

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Impairment of immunogenicity of Salmonella typhi Ty21a due to pre-existing cross-reacting intestinal antibodies.
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